

WHAT IS CLAIMED IS:

10. A measuring apparatus for measuring genetic sequence of electrically charged biopolymers by hybridization, said apparatus comprising:

10, a container that contains a biopolymer and is removable from said measuring apparatus; and

one or more electrodes for applying an electric field to said container, said one or more electrodes being electrically insulated from said container.

11. The apparatus of claim 10, wherein said container is made of a film.

12. The apparatus of claim 10, wherein said one or more electrodes are provided with protrusions formed at spatial positions corresponding to sites whereat gather a plurality of types of biopolymeric molecules within said container.

13. The apparatus of claim 12, wherein conductive members are formed at spatial positions corresponding to said sites.

14. The apparatus of claim 10, wherein said one or more electrodes are in mechanical contact with said container.

15. The apparatus of claim 10, wherein said one or more electrodes are transparent electrodes.

16. The apparatus of claim 15, wherein said one or more electrodes are made of ITO film.

17. The apparatus of claim 12, wherein said biopolymeric molecules are RNA, PNA, or electrically charged protein molecules.

APPENDIX "A"

18. The apparatus of claim 10, further comprising means for altering direction of an electric field so that wrongly hybridized segment pairs are separated.

19. The apparatus of claim 18, wherein said container is made of a film.

20. The apparatus of claim 18, wherein said one or more electrodes are provided with protrusions formed at spatial positions corresponding to sites whereat gather a plurality of types of biopolymeric molecules within said container.

21. The apparatus of claim 20, wherein conductive members are formed at spatial positions corresponding to said sites.

22. The apparatus of claim 18, wherein said one or more electrodes are in mechanical contact with said container.

23. The apparatus of claim 18, wherein said one or more electrodes are transparent electrodes.

24. The apparatus of claim 23, wherein said one or more electrodes are made of an ITO film.

25. The apparatus of claim 20, wherein said biopolymeric molecules are RNA, PNA, or electrically charged protein molecules.

26. The apparatus of claim 10, wherein said container is made of a film, said one or more electrodes are provided with protrusions formed at spatial positions corresponding to sites whereat a plurality of types of biopolymeric molecules gather within said container; said one or more electrodes are in mechanical contact with said container and are transparent film.

27. The apparatus of claim 26, wherein said biopolymeric

molecules are RNA, PNA or electrically charged protein molecules.

28. The apparatus of claim 18, wherein said container is made of a film, said one or more electrodes are provided with protrusions formed at spatial positions corresponding to sites whereat a plurality of types of polymeric molecules gather within said container, and wherein conductive members are formed at spatial positions corresponding to said sites; and said one or more electrodes are in mechanical contact with said container and are of transparent film.

29. The apparatus of claim 28, wherein said biopolymeric molecules are RNA, PNA, or electrically charged protein molecules.

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